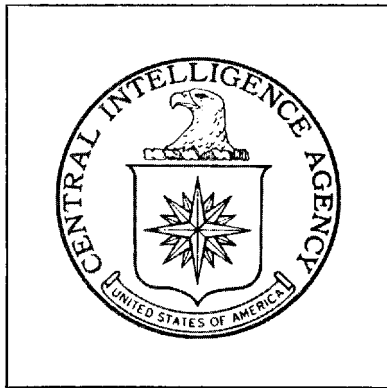


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DIRECTORATE OF
INTELLIGENCE

Declass Review by
NIMA / DoD

Imagery Analysis Report

Detailed Mensural Analysis of
Soviet C Class SSGN

Secret

DDI/IAR 71302

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CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
Imagery Analysis Service

DETAILED MENSURAL ANALYSIS OF
SOVIET C CLASS SSGN

SUMMARY

Low altitude aerial photography [] and surface
photography [] have provided fair-to-good imagery from
which IAS has made a detailed mensural analysis of the Soviet C Class
Nuclear Powered Guided Missile Submarine (SSGN).

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The principal objective of this report is to provide scale draw-
ings showing as much of the submarine's exterior details as possible
from the referenced photography.

NOTE: This report was prepared in direct support of the Central
Intelligence Agency.

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DISCUSSION

[redacted] Soviet C Class SSGN was photographed by a [redacted] Almost 100 fair-to-good quality photographs were taken of this surfaced unit while it rendezvoused with two Soviet scientific research ships in the area. All mensuration in this report, except for that of the forward weapons system, was derived exclusively from the [redacted] [redacted] photographs. Measurements of the forward weapons system were obtained in part from these photographs but mostly from slightly better quality photographs of a C Class unit [redacted] The resultant analysis is reflected in the scale drawings in Figure 1.

All dimensions in this report were provided by the Photogram-metric Division of NPIC. Neither of the two sets of photographs was of sufficient quality to accurately discern all the detail believed to be present on the C Class submarine. Due to the difficulty of establishing an endpoint for the waterline bow, the overall waterline length of the submarine (295 feet) is considered accurate

[redacted] All details depicted by solid lines in Figure 1 are believed to be accurate [redacted] [redacted] Details which could not be clearly seen are indicated by dashed lines.

The mensuration procedure used involved a multiphoto three dimensional solution. The relative configuration of the submarine was first established with the aid of the NPIC computer-derived SHAPE program for small format photography. The actual size, or scale, of the three dimensional model of the submarine was then determined using the fifth-of-a-meter vertical separation between the individual fore and aft draft markings painted on the outside of the submarine.

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REFERENCES



Requirement

C-S19-85,997

IAS Project

050947

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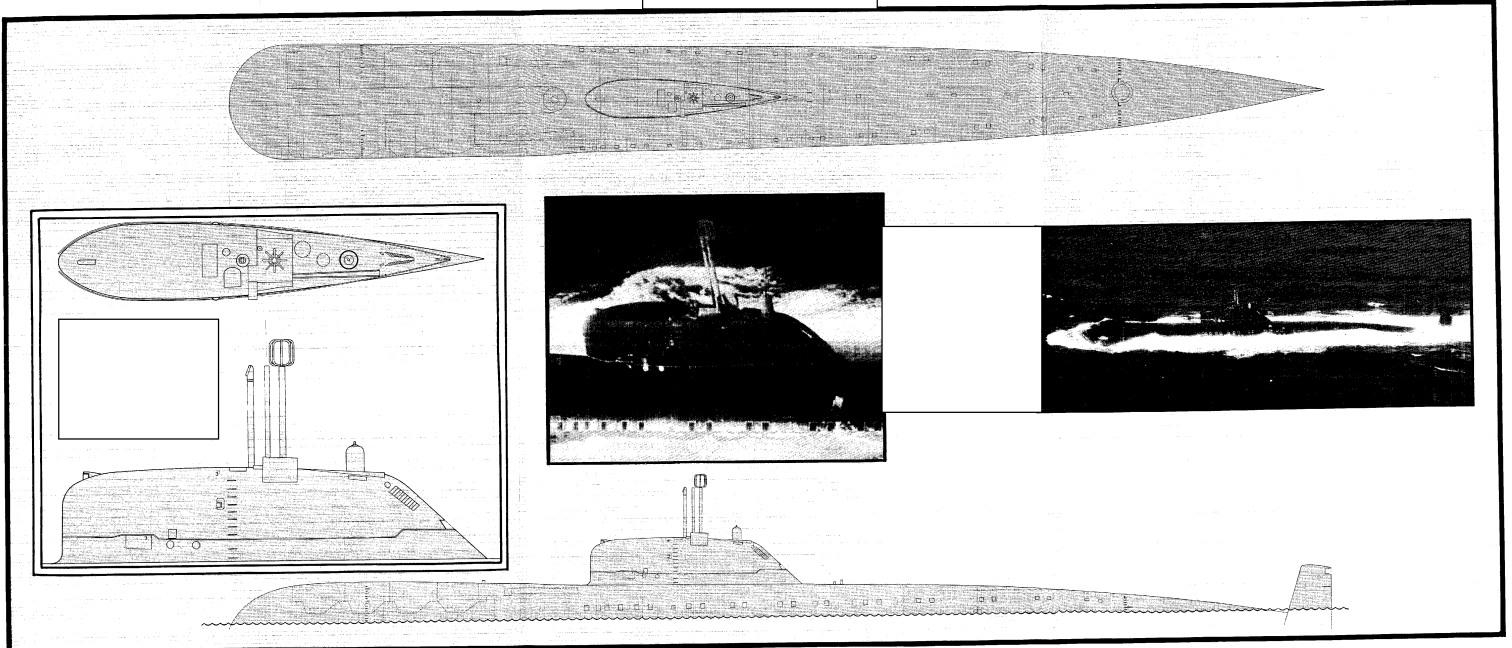


FIGURE 1. LINE DRAWING OF C CLASS SSBN WITH PHOTOGRAPHIC INSERTS.

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